UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION 2
CARIBBEAN ENVIRONMENTAL PROTECTION DIVISION
MULITMEDIA PERMITS AND COMPLAINCE BRANCH

Industrial Facility
NPDES Stormwater Inspection

AES PUERTO RICO, L.P.

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COAL-FIRED STEAM POWER PLANT AND MARINE CARGO HANDLING DOCK
Road PR-3, Km. 142, Jobos Ward, Guayama, Puerto Rico 00784
Coordinates: Latitude 17° 56' 42" N; Longitude 66° 09' 02" W

Sections 301(a) and 402 of the Clean Water Act
NPDES Regulation: 40 C.F.R. Part 122

NPDES Permit Number: PRR053093

Inspection Dates: July 16-17, 2018

Participating Personnel:

U.S. EPA: José A. Rivera, BSCE, Lead Environmental Engineer
Clean Water Act Team

AES Puerto Rico, LP: Héctor Ávila, Senior Environmental Coordinator
Pedro Labayén, Stormwater Coordinator

Inspection Report Prepared by: José A. Rivera, BSCE — 9/4/18 Date
Lead Environmental Engineer
Clean Water Act Team

Inspection Report Approving Officer: Nancy Rodríguez, P.E. — 9/4/18 Date
Chief
Multimedia Permits and Compliance Branch

1. INTRODUCTION

This Inspection Report includes findings and observations concerning the National Pollutant Discharge Elimination System (NPDES) Stormwater Inspection (Inspection) conducted by Lead Environmental Engineer and Enforcement Officer, José A. Rivera (EPA Inspector), of the United States Environmental Protection Agency's (EPA) Caribbean Environmental Protection Division (CEPD) at the AES Puerto Rico, L.P. (AES) coal-fired steam power plant ("Facility" or "Plant") located in Guayama, Puerto Rico.[1]

Upon showing of credentials to the guard on-duty, the EPA Inspector was allowed entry into the Facility to perform the Inspection pursuant to the authority in Section 308(a) of the CWA. The purposes of the Inspection were to:

1) assess whether AES implemented corrective actions to address the findings of violation included in the Notice of Violation letter that EPA issued on August 3, 2017 (the "NOV Letter");[2] and

2) evaluate AES's compliance with the NPDES Multi-Sector General Permit for Stormwater Discharges from Industrial Activity (MSGP).

The first day of the Inspection took place on Monday, July 16, 2018, from 12:25 pm to 6:30 pm, local time. The EPA Inspector focused the first day of the Inspection on Facility's records review, and did not conduct a Facility walkthrough.

The second day of the Inspection took place on Tuesday, July 17, 2018, from 8:45 a.m. to 12:00 p.m., local time. The EPA Inspector focused the second day of the Inspection on the completion of the Facility's records review and performed a walkthrough of the Agremax Pile and outfall 002. Dry weather and sunny skies prevailed during the walkthrough of the Facility.

The following employees represented AES during the Inspection:

- First Day: Mr. Héctor M. Ávila, Senior Environmental Coordinator; and Mr. Pedro Labayén (via telephone), Stormwater Coordinator; and

- Second Day: Mr. Ávila, Mr. Labayén, Mr. Carlos M. González, Coal Combustion Products Leader, and Winston R. Esteves, Environmental Consultant.[3]

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[1] A walkthrough of the AES marine cargo handling dock (the "Dock") was not performed during the Inspection. However, a review of records pertaining to Outfall 001 was performed. Outfall 001 is located at the Dock.

[2] AES sent its response to the NOV Letter by letter dated August 25, 2017.

[3] Other AES personnel participated in the Inspection Exit Meeting, which was conducted at the end of the second day of the Inspection. The AES personnel included Mr. Elías Sostre, Operations Manager and Rafael Quintana, Maintenance Manager. A copy of the Exit Meeting attendance list was placed in the Facility's NPDES records retained at CEPD.

2. AES PUERTO RICO, L.P.

AES is a for-profit corporation organized under the laws of the State of Delaware. AES was registered in the Department of State of the Commonwealth of Puerto Rico on August 9, 1999, under registration number 11062.[4] On or about November 2002, AES began to operate its Facility, which is located in the municipality of Guayama, Puerto Rico.

3. COAL-FIRED STEAM ELECTRIC POWER PLANT

The Facility site is a gated 84-acre parcel of land and leveled above the 100-year flood elevation. The Facility is bordered to the north by TAPI Puerto Rico, Inc., a former pharmaceutical facility, and vacant lands owned by the Puerto Rico Land Administration; to the east by Chevron Phillips Chemical Puerto Rico Core, Inc., a former petrochemical complex; to the south by wetlands and Las Mareas Bay; and to the west by AES Ilumina, LLC, a photovoltaic power generation complex.

The Plant is mainly comprised of employee parking facilities; two (2) coal-fired electric power generation units that host two (2) electric generators; an above-ground coal storage pile; a limestone storage dome; a CCR storage pile; an office building; material and equipment storage buildings; four (4) water retention ponds known as the "Coal Pile Runoff Pond," the "Storm Water Runoff Pond," the "Patillas Channel Pond," and the "Make-up Water Pond;" a cooling tower; water treatment facilities; and contaminated and non-contaminated storm water collection, conveyance and discharge systems.[5] The primary operations at the Facility are best described by the Standard Industrial Classification (SIC) Code 4911.[6]

The Facility has three (3) regulated stormwater discharge points into surface waters designated as Outfall 001, Outfall 002 and Outfall 003. Outfall 001 conveys stormwater associated with industrial activity from the Dock into Las Mareas Bay. Outfall 002 conveys stormwater associated with industrial activity from portions of the west and southwest areas of the Facility into wetlands. Outfall 003 conveys stormwater associated with industrial activity from the Storm Water Pond's overflows and nearby areas, such as the heavy equipment maintenance shop and open yards, into wetlands.[7]

4. MULTI-SECTOR GENERAL PERMIT FOR STORMWATER DISCHARGES FROM INDUSTRIAL ACTIVITY

On June 4, 2015, EPA re-issued the MSGP, which is commonly referred to as the "2015 MSGP." The MSGP became effective on June 4, 2015 and expires on June 4, 2020.[8]

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[4] Source: http://www.estado.gobierno.pr

[5] Generation: 525 megawatts (gross production) and 454 megawatts (net production).

[6] SIC Code 4911 includes establishments engaged in the generation, transmission, and/or distribution of electricity or gas or steam.

[7] The EPA Inspector did not visit Outfall 001 during the walkthrough of the Facility.

[8] EPA issued AES the 2008 MSGP Tracking Number PRR05BL65 for the Facility. EPA issued a new tracking number (PRR05093) under the 2015 MSGP.

Among others, the MSGP required operators of facilities with storm water discharges associated with industrial activity to prepare and implement a SWPPP, prepare and submit a complete and accurate Notice of Intent (NOI), conduct inspections, perform visual examination of storm water discharges, perform benchmark monitoring, maintain records on-site, and prepare and submit reports to EPA. Subsector O.1 of the MSGP includes specific requirement for the steam electric generating facilities, such as the Facility.

AES filed a NOI, and obtained MSGP coverage beginning on October 3, 2015. The MSGP tracking number assigned to the AES was PRR053093.

5. GUIDANCE DOCUMENT FOR RELIEF AFTER HURRICANE IRMA AND MARIA

On December 21, 2017, EPA issued a document entitled "Guidance and Temporary Requirements for Post Hurricanes Recovery Efforts Applicable to Permittees with Coverage under the NPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity in Puerto Rico" (Guidance Document). The purpose of the Guidance Document was to advise permittees with coverage under the MSGP located in the Commonwealth of Puerto Rico, that as a result of Hurricanes Irma and Maria (Hurricanes), EPA was willing to provide temporary relief to parties that were unable to meet certain requirements and conditions included in the MSGP.

EPA indicated in the Guidance Document that EPA expected that permittees will continue to follow and comply with the MSGP requirements (i.e. implementation of control measures) and conditions (i.e. performance of inspections and corrective actions) to the fullest extent practicable, and will continue to keep those records (i.e. inspection reports, stormwater pollution prevention plan) that are necessary to satisfy the record-keeping requirements of the MSGP. Also, permittees, to the best of their ability, were expected to submit records, as required by the MSGP, to EPA and the Environmental Quality Board (EQB) of Puerto Rico, when applicable, using whatever services (i.e. mail hand-delivery, electronic mail) available. Further, permittees should have taken, and should continue to take, all reasonable steps to minimize and prevent any discharge of pollutants which had or has a reasonable likelihood of adversely affecting human health or the environment.

The EPA Inspector sent to AES the Guidance Document via electronic mail on December 21, 2017, and Mr. Ávila and Mr. Labayén confirmed receipt of the Guidance Document during the Inspection.

6. ENTRY MEETING

Upon showing of credentials to Mr. Ávila at the AES office building, the EPA Inspector proceeded to conduct the entry meeting of the Inspection. The EPA Inspector explained Mr. Ávila the purpose of the Inspection (see above), the records to be reviewed, and the expected areas of the Facility to be visited during a walkthrough.

7. REVIEW OF RECORDS

The EPA Inspector performed a review of the records that AES retains at the Facility on the entire first day of the Inspection, and completed such review during the second day of the Inspection prior to conducting the walkthrough of the Facility.[9]

The following includes findings, comments and areas of concern resulting from the review of the records. It is noted that the review of the records follows the order of the requirements and conditions included in the MSGP.

a. *Employee Training* – Part 2.1.2.8 of the MSGP indicates that the permittee must train all employees who work in areas where industrial materials or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of your stormwater pollution prevention team.

   Findings: AES did not conduct employee training in 2017 and 2018. The employee training that AES provided in 2016 did not include field personnel responsible for the installation, maintenance, and/or repair of controls, such as those individuals that are responsible for the implementation of the Facility's dust control activities.

b. *Routine Facility Inspections* – Part 3.1.2 of the MSGP indicates that the permittee must document the findings of the facility inspections and maintain the report with the SWPPP, as required in Part 5.5 of the MSGP.

   The EPA Inspector reviewed the routine facility inspection documentation for the January 1, 2017 to June 30, 2018 period. Specifically, the EPA Inspector review documents entitled "Storm Water Industrial Routine Facility Inspection Form" that AES used to document the routine facility inspections. These forms were dated March 14, 2017, March 23, 2017, May 31, 2017, August 11, 2017, November 13, 2017, February 27, 2018, and May 14, 2018.

   Finding: EPA Inspector found that the forms indicated above were not signed and certified by an AES official, as required in Appendix B, Subsection 11 of the MSGP. Rather, the forms were signed and certified by the inspector that performed the routine facility inspections.

   Additional findings are presented below concerning the facility inspection documentation.

   1) March 23, 2017 Inspection – The inspection was performed during wet weather, and the Storm Water Industrial Routine Facility Inspection Form indicates that:

      a) a diversion system will be constructed as an additional erosion control at that drainage area;[10] and

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[9] The EPA Inspector also performed reviews of AES records in EPA's position prior and after the Inspection.
[10] See Stormwater Sample Point 002.

b) an evaluation of the storm water drainage has been performed in order to reduce the potential sedimentation at outfall 002, and a diversion system has been proposed in order to address erosion potential from the road located south from the Agremax pile.[11]

Finding: The EPA Inspector observed during the walkthrough of the Facility that a diversion system (speed bump) was installed near the metal grate associated with Outfall 002. The inclination of the speed bump will divert runoff into a vegetated area near outfall 002.

2) May 30, 2017 Inspection – The Storm Water Industrial Routine Facility Inspection Form indicates that:

a) a segment of the silt fence located north of the coal pile storage pile needed replacement;[12] and

b) sediment accumulation at the Sediment Trap and Concrete Swale.

Findings: The AES inspector did not indicate the specific location, the length of the affected area, and the expected timeframe to address his finding concerning the silt fence. The AES inspector did not mention whether AES constructed the diversion system described in the previous routine facility inspection, and the conditions he observed of this runoff diversion structure.

3) August 11, 2017 Inspection – The Storm Water Industrial Routine Facility Inspection Form indicates that:

a) tracking of sediment by vehicles from an adjacent public dirt road to the plant entrance has been affecting benchmark compliance at this point. An analysis of corrective action will be performed by an external contractor to mitigate the problem;[13]

b) a segment of the silt fence located north of the coal storage pile was replaced. Silt fence installed west of the coal pile needed replacement. A notification was performed and new silt fence was ordered;[14]

c) a sediment trap was cleaned on July 31, 2017;

d) a corrective action evaluation will be performed by an external contractor to reduce or eliminate the discharge of vehicle tracked solids through outfall 002 and get the plant into compliance with the benchmark parameter.[15]

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[11] See Additional Control Measures.
[12] See Super Silt Fence.
[13] See Stormwater Sampling Point Outfall 002.
[14] See Super Silt Fence.
[15] See Additional Control Measures.

The AES inspector documented that the concrete channel was cleaned on July 23, 2017, per the finding documented during the May 30, 2017 routine facility inspection. Also, the AES inspector documented that the sediment trap was cleaned.

Findings: It is unclear which silt fence area of the coal storage pile was replaced and which one remains in need of replacement. The Storm Water Industrial Routine Facility Inspection Form did not include a timeframe to address the finding. AES did not make available a written evaluation of an external contractor to reduce or eliminate the discharge of vehicle tracked solids through outfall 002.

4) November 13, 2017 Inspection – The inspection was performed during wet weather, and the Storm Water Industrial Routine Facility Inspection Form indicates that:

   a) the sediment trap required maintenance and sediment removal;

   b) the concrete swale required maintenance and sediment removal; and

   c) a corrective action evaluation will be performed by an external contractor to reduce or eliminate the discharge of vehicle tracked solids through outfall 002 to bring the plant into compliance with the benchmark parameter.[16]

   Findings: The AES inspector did not indicate the specific locations within the concrete swale that required maintenance. AES did not make available a written evaluation of an external contractor to reduce or eliminate the discharge of vehicle tracked solids through outfall 002.

5) February 27, 2018 Inspection – The Storm Water Industrial Routine Facility Inspection Form indicates that:

   a) a corrective action to reinstall the silt fence must be completed;

   b) the sediment trap required maintenance and sediment removal; and

   c) the concrete swale required maintenance and sediment removal.

   Findings: The AES inspector did not indicate the specific locations within the concrete swale that required maintenance. The AES inspector did not provide a timeframe for the maintenance and sediment removal.

6) May 14, 2018 Inspection – The Storm Water Industrial Routine Facility Inspection Form indicates that:

   a) the silt fence was affected by Hurricane Maria, and a corrective action to re-install the silt fence must be completed; and

[16] See Additional Control Measures.

b) AES was working on a corrective action to reduce or eliminate the discharge of vehicle tracked solids through outfall 002 to bring the plant into compliance with benchmark parameter. A hydrologic analysis from the affected area has been performed, including additional or potential plant stormwater storage capacity. Professional recommendations and different alternatives will be provided and evaluated to comply with the MSGP 2015 Permit.[17] The AES inspector documented, once again, the finding about the silt fence, which was observed and documented during the previous routine facility inspection.

c. *Quarterly Visual Assessment of Stormwater Discharges* – Part 3.2.2 of the MSGP indicates that the permittee must document the results of the visual assessments and maintain the documentation onsite with the SWPPP, as required in Part 5.5 of the MSGP. The EPA Inspector performed a review of the quarterly visual assessment of stormwater discharges documentation for the January 1, 2017 to June 30, 2018 period.

For the January to March 2017 quarterly period, samples were taken for all three outfalls on March 23, 2017. For the April to June 2017 quarterly period, samples were taken for Outfall 001 on April 24, 2017, and for Outfall 002 and Outfall 003 on April 26, 2017. For the July to September 2017 quarterly period, samples were taken for all three outfalls on August 3, 2017.

Findings: For the October to December 2017 quarterly period, all samples were taken for all three outfalls on November 13, 2017, but the amount of rain precipitation was not written in the documentation. For the January to March 2018 quarterly period, AES did not take any samples. Documentation supporting the rationale for not taking the samples was not developed.

The EPA Inspector reviewed the rain precipitation data recorded by AES for the January to March 2018 quarterly period. In addition, the EPA Inspector reviewed the Rain Gauge Standard Operating Procedure (Rain Gauge SOP), originally issued on July 19, 2012, and revised on May 9, 2017. AES based its Rain Gauge SOP on the use of automatic samplers located at all three sampling points.

Findings: Based on the rain data and the Rain Gauge SOP, a sample should have been taken at Outfall 001 on February 12, 2018.[18] For the April to June 2018 quarterly period, AES took samples at all three outfalls on April 26, 2018; however, the documentation that AES provided during the July 16, 2018 review of records was not signed. The documentation was signed on July 17, 2018, the second day of the Inspection, and it was shown to the EPA Inspector during the review of records.

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[17] See Additional Corrective Action.

[18] On February 12, 2018, AES recorded rain precipitation of 0.15 inches at 4:00 pm. Similarly, on February 28, AES recorded a rain precipitation of 0.18 inches at 5:30 pm. Mr. Labayén indicated that the three automatic samplers were damaged by Hurricane Maria and had not been installed at the Facility. He also indicated that he has been taken the storm water discharge samples manually.

d. *Corrective Actions*[19] – Part 4.4 of the MSGP indicates that the permittee must document the existence of any of the conditions listed in Part 4.1 (conditions requiring SWPPP review and revision to ensure effluent limits are met) or Part 4.2 (conditions requiring SWPPP review to determine if modifications are necessary) of the MSGP within 24 hours of becoming aware of such condition. Part 4.4 of the MSGP requires that the corrective action documentation be signed and certified in accordance with Appendix B, Subsection 11 of the MSGP.

The EPA Inspector performed a review of five (5) corrective actions documents that AES prepared in 2017.

Finding: The corrective action documents were not signed and certified, as required in Part 4.4 of the MSGP.

1) The corrective action documentation, dated April 12, 2017, indicates that a diversion of stormwater runoff from unpaved and heavy truck entrance road and installation of drain guards were completed on April 22, 2017. This corrective action is based on the finding documented in the Storm Water Industrial Routine Facility Inspection Form that AES prepared for the routine facility inspection conducted on March 14, 2017.

   Finding: During the review of the SWPPP, which was revised on April 2017, the EPA Inspector could not determine whether AES revised the SWPPP to include the new controls implemented as a result of the corrective action.

2) The corrective action documentation, dated July 1, 2017, indicates that a replacement of silt fence in areas of the coal pile was completed on September 8, 2017. This corrective action is based on the finding documented in the Storm Water Industrial Routine Facility Inspection Form that AES prepared for the routine facility inspection conducted on May 30, 2017.

   Findings: The corrective action was implemented beyond the timeframe established in Part 4.3.2 of the MSGP. AES did not send to EPA a notification of its intention to exceed 45-day deadline established in Part 4.3.2 of the MSGP, the rationale for an extension of time and a completion date.

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[19] Part 4.3.2 of the MSGP established the subsequent actions that a permittee shall take to complete corrective actions. The corrective action must be completed before the next storm event, if possible, and within 14 calendar days from the time of discovery of the corrective action condition. If it is infeasible to complete the corrective action within 14 calendar days, the permittee must document why it is infeasible to complete the corrective action within the 14-day timeframe. Also, the permittee must identify a schedule for completing the work, which must be done as soon as practicable after the 14-day timeframe but no longer than 45 days after discovery. If the completion of corrective action will exceed the 45-day timeframe, the permittee may take the minimum additional time necessary to complete the corrective action, provided that the permittee notify the EPA of its intention to exceed 45 days, the rationale for an extension, and a completion date, which must also be included in the corrective action documentation. Where the corrective actions result in changes to any of the controls or procedures documented in the SWPPP, the permittee must modify the SWPPP accordingly within 14 calendar days of completing corrective action work.

3) The corrective action documentation, dated July 21, 2017, indicates that the installation of the diversion berm extension at gate #3 truck entrance was completed on August 8, 2017; the removal of vegetative material from the stormwater pond was completed on September 8, 2017; and three additional sprinklers were installed on August 24, 2017.

   The documentation mentioned soils stabilization with crushed stone in four different areas of the Facility (e.g., cooling tower). This corrective action is based on the finding documented in the Storm Water Industrial Routine Facility Inspection Form that AES prepared for the routine facility inspection conducted on August 11, 2017.

   Findings: The documentation did not provide a completion date for the soil stabilization. AES did not document the findings leading to this corrective action in any of the Storm Water Industrial Routine Facility Inspection Forms that AES prepared prior to the routine facility inspection conducted on August 11, 2017.

4) The corrective action documentation, dated July 31, 2017, indicates that a stormwater concrete channel repaired was completed on July 21, 2017. This corrective action is based on the finding documented in the Storm Water Industrial Routine Facility Inspection Form that AES prepared for the routine facility inspection conducted on March 23, 2017, July 21, 2017, and August 11, 2017.

5) The corrective action documentation, dated November 15, 2017, indicates that soils stabilization with crushed stone in four different areas (e.g., cooling tower) of the Facility was established; coal pile regrading and maintenance of buffer zone between pile and stormwater channel was required; and sampling equipment needs repair.

   Findings: The corrective action documentation did not indicate the completion date for coal pile regrading, maintenance of buffer zone and sampling equipment repair and installation. AES did not send to EPA a notification of its intention to exceed 45- day deadline established in Part 4.3.2 of the MSGP, the rationale for an extension of time and a completion date for the placement of operation of the automatic sampling equipment.

6) Mr. Labayen indicated that the sampling equipment is still under repair, and that re-installation of the equipment is unknown. The sampling procedures that AES established in the SWPPP refers to the use of automatic sampling equipment.

   Finding: AES has not taken samples at the sampling point 001 once the sampling equipment became nonoperational.

The EPA Inspector also found that AES documented corrective actions that were not identified in the routine facility inspection documentation. For example, the diversion berm extension that was installed at gate #3 truck entrance; the vegetative material removed from the storm water retention pond; and the three additional water sprinklers that were installed on the Agremax pile and placed in service.

e. *Benchmark Monitoring* – Part 6 of the MSGP indicates that the permittee must collect and analyze stormwater samples and document monitoring activities consistent with the procedures described in Part 6 and Appendix B, Subsections 10-12 of the MSGP, and any additional sector-specific or state/tribal-specific requirements in Parts 8 and 9 of the MSGP, respectively.[20] Part 7 of the MSGP includes the requirements for reporting and recordkeeping.

The EPA Inspector review of the benchmark monitoring records for the four quarters in 2016 and the January to March 2018 quarter, and found that:

1) On February 19, 2016, a stormwater sample was taken at Outfall 001. A chain of custody record was prepared. The laboratory result for Iron was 1.18 mg/L.

2) On February 19, 2016, a stormwater sample was taken at Outfall 002. A chain of custody record was prepared. The laboratory result for Iron was 14.0 mg/L.

3) On February 19, 2016, a stormwater sample was taken at Outfall 003. A chain of custody record was prepared. The laboratory result for Iron was 0.305 mg/L.

4) On April 1, 2016, a stormwater sample was taken at Outfall 001. A chain of custody record was prepared. The laboratory result for Iron was 0.733 mg/L.

5) On April 1, 2016, a stormwater sample was taken at Outfall 002. A chain of custody record was prepared. The laboratory result for Iron was 0.469 mg/L.

6) On April 1, 2016, a stormwater sample was taken at Outfall 003. A chain of custody record was prepared. The laboratory result for Iron was 0.186 mg/L.

   Finding: AES did not take a stormwater sample at Outfall 001 during the July to September 2016 monitoring period. AES representatives indicated that the sample was not taken because the automatic sampling equipment was out of service.

7) On August 13, 2016, a stormwater sample was taken at Outfall 002. A chain of custody record was prepared. The laboratory result for Iron was 0.222 mg/L.

8) On July 25, 2016 and August 26, 2018, stormwater samples were taken at Outfall 003. A chain of custody record was prepared for each sampling event. The laboratory results for Iron were 0.337 mg/L and 4.90 mg/L, respectively.

9) On October 18, 2016, a stormwater sample was taken at Outfall 002. A chain of custody record was prepared. The laboratory result for Iron was 0.222 mg/L.

[20] Table 8.O-1 of the MSGP identifies the parameter for which AES must perform benchmark monitoring. The parameter to be monitored under Subsector O1 is Total Iron, which has a benchmark value of 1.0 mg/L.

10) On October 18, 2016, a stormwater sample was taken at Outfall 003. A chain of custody record was prepared. The laboratory result for Iron was 0.188 mg/L.

11) On October 19, 2016, a stormwater sample was taken at Outfall 001. A chain of custody record was prepared. The laboratory result for Iron was 0.776 mg/L.

12) On March 23, 2017, a stormwater sample was taken at Outfall 002. A chain of custody record was prepared. The laboratory result for Iron was 12.8 mg/L.

13) On April 24, 2017, a stormwater sample was taken at Outfall 001. A chain of custody record was prepared. The laboratory result for Iron was 0.322 mg/L.

14) On April 26, 2017, a stormwater sample was taken at Outfall 002. A chain of custody record was prepared. The laboratory result for Iron was 1.88 mg/L.

15) On August 27, 2017, a stormwater sample was taken at Outfall 002. A chain of custody record was prepared. The laboratory result for Iron was 2.51 mg/L.

16) On November 13, 2017, a stormwater sample was taken at Outfall 002. A chain of custody record was prepared. The laboratory result for Iron was 0.063 mg/L.

17) On April 26, 2018, a stormwater sample was taken at Outfall 002. A chain of custody record was prepared. The laboratory result for Iron was 0.593 mg/L.

The EPA Inspector reviewed the rain data that AES recorded for the January to March 2018 monitoring period, and discussed it with AES representatives during the review of records. Based on the data and explanations provided by AES representatives, a stormwater discharge that could have been sample did not take place thru Outfall 002. Regarding Outfall 001, AES did not have the stormwater sampling equipment in operation to sample any discharge during the January to March 2018 monitoring period.

According to Part 6.2.1.2 of the MSGP, after AES collects four quarterly samples, if the average of the four monitoring values for any parameter does not exceed the benchmark, AES has fulfilled the benchmark monitoring requirements for the parameter for the MSGP term.

The Iron average concentration for the four monitoring values at Outfall 003 was 0.254 mg/L in 2016, which is lower than the benchmark value of 1.0 mg/L. AES representatives indicated that AES ceased performing benchmark monitoring at Outfall 003 based on the results of the average concentration for the four monitoring values.

According with Part 6.2.1.2 of the MSGP, after AES collects four quarterly samples, if the average of the four monitoring values for any parameter exceeds the benchmark, AES must, in accordance with Part 4, review the selection, design, installation, and implementation of the control measures to determine if modifications are necessary to meet the effluent limits in the MSGP, and either:

- make the necessary modifications and continue quarterly monitoring until AES has completed four additional quarters of monitoring for which the average does not exceed the benchmark; or

- make a determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the technology-based effluent limits or are necessary to meet the water-quality-based effluent limitations in Parts 2.1 and 2.2 of the MSGP, in which case AES must continue monitoring once per year. AES must also document the rationale for concluding that no further pollutant reductions are achievable, and retain all records related to this documentation with the SWPPP developed for the Facility.

Based on Part 6.2.1.2 of the MSGP, AES must review the control measures and perform any required corrective action immediately (or document why no corrective action is required), per Part 4 of the MSGP, without waiting for the full four quarters of monitoring data, when an exceedance of the four-quarter average is mathematically certain. If after modifying the control measures and conducting four additional quarters of monitoring, the average still exceeds the benchmark (or if an exceedance of the benchmark by the four-quarter average is mathematically certain prior to conducting the full four additional quarters of monitoring), AES must again review the control measures and take one of the two actions (see bullets) above.

Table 1 and **Table 2** depict the data that the EPA Inspector reviewed and evaluated to calculate the average concentrations.

Table 1

	Laboratory Results for Iron (mg/L)		
Monitoring Period	Outfall 001	Outfall 002	Outfall 003
January to March 2016	1.18	14	0.305
April to June 2016	0.733	4.69	0.186
July to September 2016	Sample was not taken	0.222 / 0.490	0.337
October to December 2016	0.776	0.222	0.188
January to March 2017	1.64	See table below	Not applicable
Average	4.30/4 = 1.08	19.1/4 = 4.78 19.0/4 = 4.85	1.016/4 = 0.254

Table 2

	Laboratory Results for Iron (mg/L)	
Monitoring Period	Outfall 001	Outfall 002
January to March 2017	1.64	12.8
April to June 2017	0.322	1.88
July to September 2017	Sample was not taken	2.51
October to December 2017	Sample was not taken	0.063
	Average	17.2 / 4 = 4.31

AES recorded rain event of 0.15 inches at 4:00 pm on February 12, 2018, and 0.18 inches at 5:30 pm on February 28, 2018. AES representatives indicated that a discharge event through Outfall 001 resulted from these two recorded rain events.

Findings: The Iron average concentration for the four monitoring values in 2016 and the first quarter of 2017 at Outfall 001 was 1.08 mg/L, which is higher than the benchmark value of 1.0 mg/L.[21] The Iron average concentration for the four monitoring values in 2016 at Outfall 002 was 4.78 mg/L, which is higher than the benchmark value of 1.0 mg/L.[22] A review of the Iron average concentration for the four monitoring values at Outfall 002 was 4.31 mg/L in 2017, which is higher than the benchmark value of 1.0 mg/L. AES has not conducted benchmark monitoring at Outfall 001 after the April to June 2017 monitoring period.

f. *Stormwater Pollution Prevention Plan* – Part 5 of the MSGP requires AES to review and update the SWPPP to implement all provisions of the MSGP prior to submitting the NOI. The EPA Inspector performed a partial review of the SWPPP. The following comments address the review:

A copy of the Stormwater Pollution Prevention Plan (SWPPP) was available at the Facility. The SWPPP was last updated on April 20, 2017, and signed and certified by the Plant Manager. Part III.F (Sampling Data) of the SWPPP refers to stormwater discharge sampling data collected during 2008.

Findings: The SWPPP does not include an updated selection, design, installation, and implementation of the control measures to determine to address Iron at Outfall 001

[21] The benchmark value included in Part O1 of the MSGP has two decimal places. The EPA Inspector used the mathematical decimal rule and calculated the standard deviation, which was 2.54

[22] As indicated elsewhere in this Report, AES sampled Outfall 002 twice during this monitoring period. This average calculation takes into account the lowest laboratory result (0.222 mg/L) for the July to September 2016 monitoring period.

and Outfall 002. The Pollution Prevention Team Members list in Worksheet 1 of the SWPPP has not been updated.[23]

g. *Annual Report* – Part 7.5 of the MSGP requires AES to submit an Annual Report to EPA electronically, per Part 7.2 of the MSGP, by January 30th for each year MSGP coverage containing information generated from the past calendar year. The EPA Inspector performed a review of the annual reports that AES prepared and submitted in 2017 and 2018, and the EPA Integrated Compliance Information System (ICIS) on July 31, 2018.

The EPA Inspector found that AES submitted to EPA an electronic annual report covering the January 1 to December 31, 2017 reporting period. This annual report was submitted on January 30, 2018.

The EPA Inspector did not find in ICIS the annual report that AES was required to submit for the October 1, 2015 to December 31, 2016 reporting period.

The AES representatives provided to EPA two documents entitled "MSGP 2016 Annual Report" and "MSGP 2017 Annual Report". The MSGP 2017 Annual Report contains the same information that the EPA Inspector found in ICIS for the annual report that AES submitted on January 30, 2018.

h. Other Comments on the Review of Records

As indicated elsewhere in this Report, the EPA Inspector performed review of records at the Facility. Nonetheless, the EPA Inspector performed further reviews of records it had obtained from AES prior to and during the Inspection.

The Stormwater Monitoring Standard Operating Procedure was originally issued on April 13, 2015, and updated on March 29, 2017. This procedure was based on the use of automatic samplers for all three outfalls.

Finding: The Procedure does not discuss manual monitoring, and has not been updated based on the MSGP.

8. WALKTHROUGH OF THE FACILITY

Upon completion of the review of records, the EPA Inspector proceeded to perform the walkthrough of the Facility on July 17, 2018. The EPA Inspector was accompanied by Mr. Ávila, Mr. Labayén, Mr. Estevez, and Mr. González. The areas of the Facility visited were the roadway from the office building to the CCR storage pile, the CCR storage pile and the Outfall 002.

The following describes the observations and the results of the interviews that the EPA Inspector made during the walkthrough:

[23] For example, the Maintenance Manager no longer works at the Facility. Also, the Plant Manager is not part of the Team.

a. *Ouftall 002* – **Picture 1** below depicts the conditions of Outfall 002.

Picture 1

Findings: It was confirmed that the automatic sampling equipment was not available. The sampling point for Outfall 002 lacked good housekeeping, as it contained debris, sediments, vegetation and other floating materials.The discharge location into wetlands lacked good housekeeping. See **Picture 2** below depicting this observation.

Picture 2

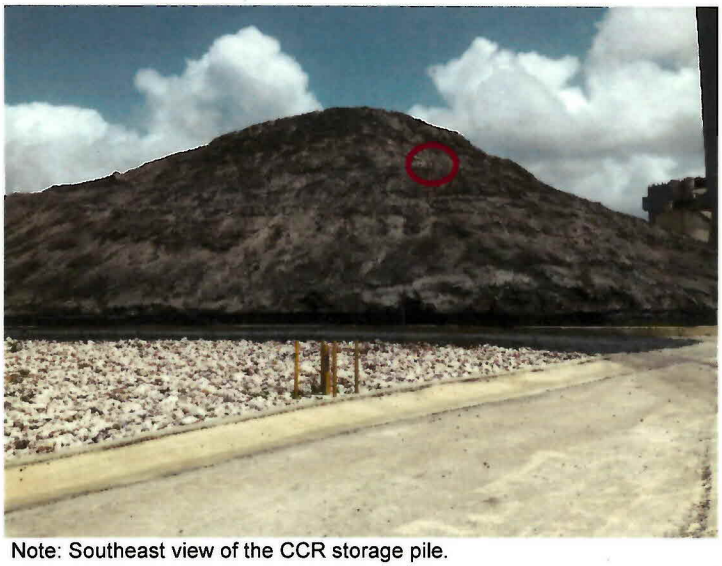
b. *Agremax Pile*

The EPA Inspector walked along the ground areas on the south, east, and limited areas of south-east of the Agremax pile. Also, the EPA Inspector walked along the principal access road to the highest point of the storage pile, and returned to the

ground thru a new access. The following includes findings and observations resulting from the walkthrough of the Agremax pile.

Finding: During the walkthrough, the EPA Inspector did not observe any spraying nozzles in operation to control dust. Mr. González indicated that three (3) of the nine (9) nozzles were undergoing repairs or replacement. **Picture 3** and **Picture 4** are examples that depict this observation.

Picture 3



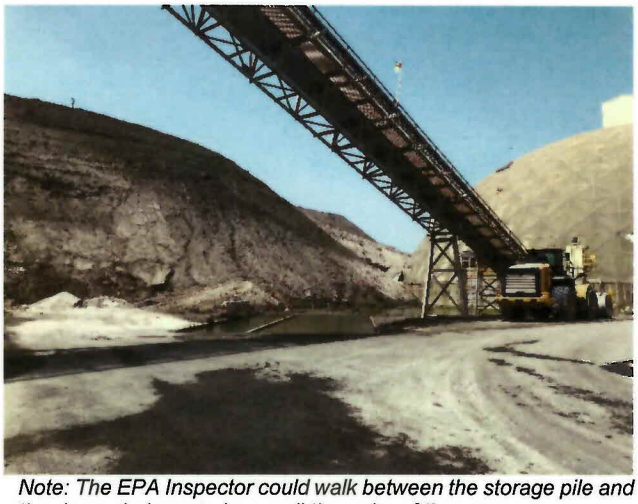
Note: Southeast view of the CCR storage pile.

Picture 4

Note: Top of CCR storage pile looking towards the east side of the Facility.

The accumulation and storage at Agremax pile expanded to the west side of the pile to a point in which the pile is in direct contact with the storage dome. **Picture 5** depicts this observation.

Picture 5



Note: The EPA Inspector could walk between the storage pile and the dome during previous walkthroughs of these areas.

Finding: The super silt fence placed over the gabion structure along the east side of the Agremax pile was in disrepair. **Picture 6** depicts this observation.

Picture 6

Mr. González indicated that the approximate accumulation at the CCR storage pile at the time of the walkthrough was 410,000 tons, and that AES exported to the State of Florida approximately 35,000 tons in March 2018, 35,000 tons in April 2018, and 36,000 tons in May. He further indicated that the final disposition of the CCR was placed in a landfill operated by a company named Waste Management.

Findings: Most of the top areas of the CCR storage pile were not wet, covered with small particles, and dust was emitting into the air. Also, a large portion of the slopes on the north, west and south areas of the Agremax pile were not wet. **Picture 7** provides an example depicting these observations.

Picture 7

Note: This picture faces the west and southwest slopes.

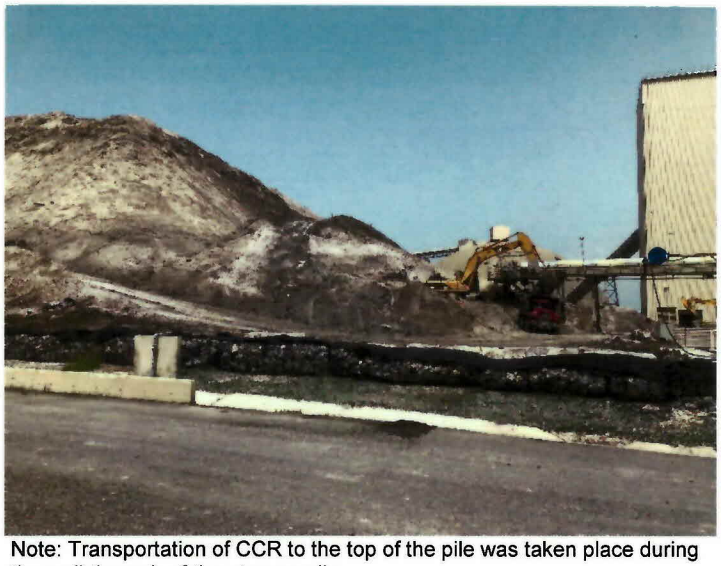
Findings: The berms located along the roadway to the top of the Agremax pile were observed with thin and loose Agremax, and very dry. The Inspector observed dust emission when heavy equipment transited thru the roadway. **Picture 8** depicts a segment of a berm with dry and loose Agremax.

Picture 8

Note: This picture also depicts the southeast side of the storage pile and a portion of the outfall 002 drainage area. This picture was taken from the highest portion of the storage pile.

AES added a second roadway at the pile that runs westbound along the north side of the pile. The entryway is on the east side, and shown on **Picture 9**.

Picture 9



Note: Transportation of CCR to the top of the pile was taken place during the walkthrough of the storage pile.

A water-mounted tank truck was observed spraying water in areas where the CCR was being deposited at the top of the storage pile. **Picture 10** depicts the truck, a spraying nozzle (not in service), and loose and dry CCR at the top of the storage pile. **Picture 11** depicts a spraying nozzle (not in service); and dry, loose and small CCR particles at the top of the storage pile. **Picture 12** depicts the added roadway on the northwest side, a slope showing dry conditions, the coal pile and the dome.

Picture 10

Note: Spraying nozzle was not spraying water.

Picture 11

Note: Spraying nozzle was not spraying water.

Picture 12

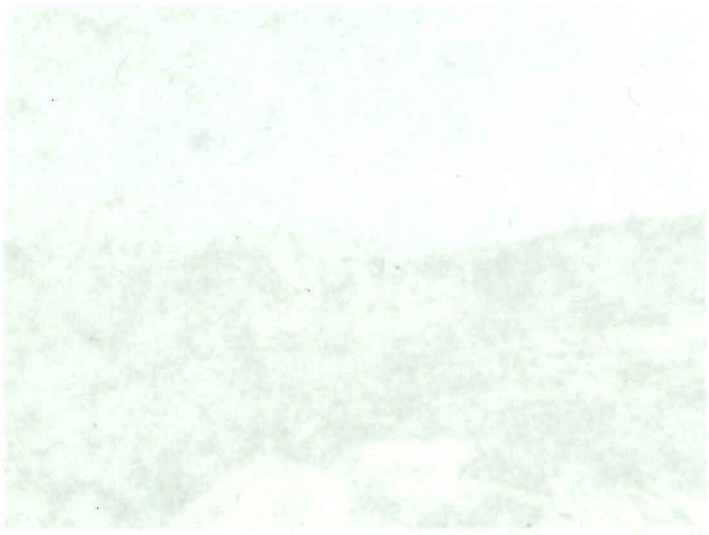
Note: Spraying nozzle was not spraying water.

The EPA Inspector experienced a lot of CCR dust emissions on his skin, face and eyes during his walkthrough of Agremax pile.

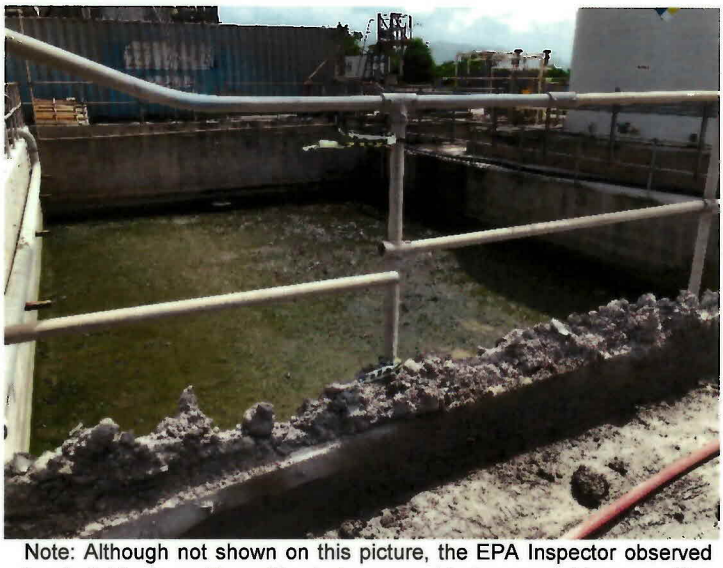
c. *Diesel Tank Secondary Containment*

Picture 13 depicts the secondary containment.

Finding: The diesel tank secondary containment lack good housekeeping practices, had a light-green colored water accumulation, and Agremax was stockpiled along the top of the concrete berm.



Picture 13



Note: Although not shown on this picture, the EPA Inspector observed two individuals working with what appeared to be a portable pump. See the red-colored hose laying on the ground.

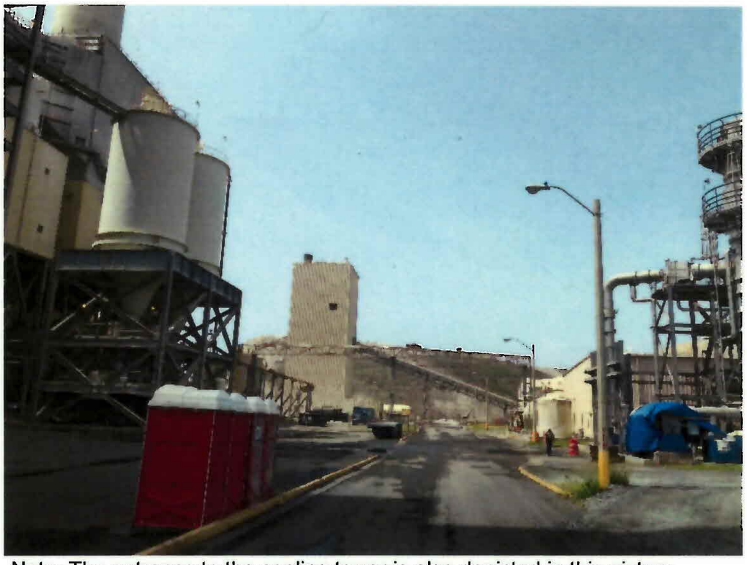
d. Storm Inlet (Catch Basin)

During the culmination of the walkthrough and walking towards the office building, the EPA Inspector observed runoff entering a storm water catch basin (inlet). The catch basin was provided with an inlet protection (e.g. rain guard).

Findings: The inlet was surrounded with significant accumulation of sediment, which resulted from an excavation that was not provided with erosion control. Also, sediment and dust accumulation were observed in the roadway towards the Agremax pile **Picture 14** depicts the observation about the inlet. **Picture 15** depicts the observation about sediment and dust accumulation.

Picture 14

Picture 15



Note: The entrance to the cooling tower is also depicted in this picture.

Findings: The dirt road entrance to the cooling tower had exposed soil and lacked soil stabilization in several areas. The EPA Inspector did not see the sweeper-mounted vehicle in operation during the walkthrough of the Facility.

The EPA Inspector provided Mr. Ávila with an exact and unaltered copy of all the photographs that the EPA Inspector took at the end of the walkthrough of the Inspection.[24]

9. EXIT MEETING

Upon completion of the walkthrough of the Facility, the EPA Inspector met with AES' representatives. The EPA Inspector provided a summary of the areas of concern and findings, which included:

a. lack of good housekeeping at the sampling point for Outfall 002;

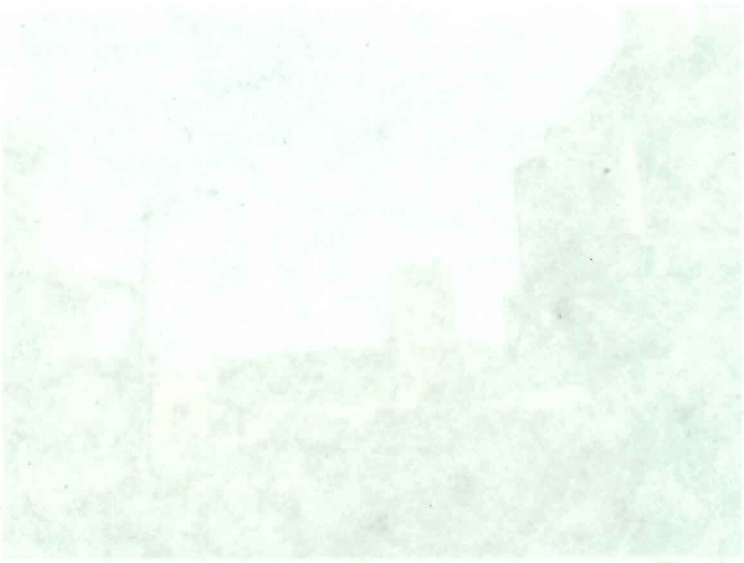
b. lack of operation of the sprinklers and observed dust emissions at the Agremax pile;

c. exceedances of the benchmark value for Iron at Outfall 002, and the need to implement additional BMPs, such as collection and re-use of the stormwater first flush during rain events;[25] and

Mr. Sostre asked about EPA's next steps and actions. The EPA Inspector replied with a brief explanation of the administrative options available to EPA under the NPDES

[24] The EPA Inspector used his personal Iphone (Model 8+).

[25] Due to the exceedances of the Iron benchmark concentration at Outfall 002 in the past, the EPA Inspector had discussed with AES representatives the re-use of the stormwater runoff first flush at Outfall 002 as a structural BMP during prior inspections. AES has documented the need to conduct engineering studies to address the benchmark concentration exceedances in routine facility inspections forms.



program. The EPA Inspector also indicated the potential for EPA to request that AES perform a study of the water sprinkler system, including the actual surveying measurement of the Agremax pile.

Finally, the EPA Inspector indicted that next step will be the preparation of an inspection report. Upon completion of the Exit Meeting, the EPA Inspector left the Facility.

End of Report